

REMARKS

Claims 1-9 are pending; and of these, claim 6 has been cancelled and claims 1 and 9 have been amended, leaving claims 1-5 and 7-9 to be examined.

The Examiner has rejected (1) claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over the Imai, et al. patent (U.S. Patent No. 6,771,882) in view of the Hori patent (U.S. Patent No. 5,991,504) and further in view the Fisher, et al. patent (U.S. Patent No. 7,133,068), and (2) claim 9 under 35 U.S.C. 103(a) as being unpatentable over the Imai, et al. patent in view of the Fisher, et al. patent. Applicant has amended Applicant's independent claims 1 and 9, and with respect to these claims and those dependent on claim 1, the Examiner's rejections are traversed.

Applicant has amended Applicant's independent claims 1 and 9 to better define Applicant's invention. More particularly, amended claim 1 recites a recording apparatus comprising imaging means for imaging an object and outputting moving image data, a memory for storing image data of one frame of the moving image data output from said imaging means, compressing means for compressing information quantity of the moving image data output from said imaging means and information quantity of the image data of one frame stored in the memory, recording means for recording the moving image data output from said compressing means and repeatedly recording the image data of one frame output from said compression means as still image data on a recording medium, recording mode setting means for setting a first recording mode for recording moving image data and still image data each having a first information quantity per unit time on a recording medium, and a second recording mode for recording moving image data and still image data each having a second information quantity larger than the first information quantity per unit

time on the recording medium, instruction means for instructing recording of a still image, and control means for controlling said recording means to start recording on the recording medium still image data in response to a recording instruction of the still image by said instruction means and to stop recording the still image data a predetermined recording period after the recording was started, wherein said control means changes the predetermined recording period for recording the still image data to a first predetermined period when the first recording mode is set by said recording mode setting means, and changes the predetermined recording period to a second predetermined period shorter than the first predetermined period when the second recording mode is set. Claim 9 has been amended to recite a recording apparatus compressing information quantity of input moving image data and image data of one frame in the input moving image data, recording the compressed image data of one frame repeatedly as still image data and the compressed moving image data on a recording medium, and including a mode switch for setting a first recording mode for recording moving image data and still image data each having a first information quantity per unit time on the recording medium and a second recording mode for recording moving image data and still image data each having a second information quantity larger than the first information quantity per unit time on the recording medium, wherein said recording apparatus starts recording on the recording medium still image data with detection data for detecting the still image data recorded on the recording medium in response to a recording instruction of the still image data and to stop recording the still image data a predetermined recording period after the recording was started, said recording apparatus changing the predetermined period to a first predetermined period when the first recording mode is set by said mode switch, and changing the predetermined period to a

second predetermined period shorter than the first predetermined period, when the second recording mode is set by said mode switch.

The constructions recited in Applicant's independent claims 1 and 9 are not taught or suggested by the Imai, et al., Hori and Fisher, et al. patents, either when taken alone or in combination. More particularly, there is no teaching or suggestion of, as recited in claim 1, Applicant's featured recording means for recording the moving image data output from said compressing means and repeatedly recording the image data of one frame output from said compression means as still image data on a recording medium, recording mode setting means for setting a first recording mode for recording moving image data and still image data each having a first information quantity per unit time on a recording medium, and a second recording mode for recording moving image data and still image data each having a second information quantity larger than the first information quantity per unit time on the recording medium, instruction means for instructing recording of a still image, in combination with Applicant's featured control means for controlling said recording means to start recording on the recording medium still image data in response to a recording instruction of the still image by said instruction means and to stop recording the still image data a predetermined recording period after the recording was started, wherein said control means changes the predetermined recording period for recording the still image data to a first predetermined period when the first recording mode is set by said recording mode setting means, and changes the predetermined recording period to a second predetermined period shorter than the first predetermined period when the second recording mode is set. Likewise, there is no teaching or suggestion among the aforementioned patents of Applicant's recording apparatus as recited in claim 9 and its features of compressing

information quantity of input moving image data and image data of one frame in the input moving image data, recording the compressed image data of one frame repeatedly as still image data and the compressed moving image data on a recording medium, and including a mode switch for setting a first recording mode for recording moving image data and still image data each having a first information quantity per unit time on the recording medium and a second recording mode for recording moving image data and still image data each having a second information quantity larger than the first information quantity per unit time on the recording medium, wherein said recording apparatus starts recording on the recording medium still image data with detection data for detecting the still image data recorded on the recording medium in response to a recording instruction of the still image data and to stop recording the still image data a predetermined recording period after the recording was started, in combination with said recording apparatus changing the predetermined period to a first predetermined period when the first recording mode is set by said mode switch, and changing the predetermined period to a second predetermined period shorter than the first predetermined period, when the second recording mode is set by said mode switch.

With respect to the Imai, et al. and Hori patents, Applicant reiterates Applicant's remarks as provided in Applicant's response dated April 7, 2008. Then, Applicant argued that each of these patents discloses only that recording can occur in two modes, SD and SDL, and that the total recording time for the SDL mode is twice that of the SD mode because the recording medium travels at half the speed. In this regard, Applicant argued, as Applicant also does now for reasons presented in the aforementioned response, that these patents fail to provide for the particular setting of the predetermined recording periods as set forth in Applicant's claims, i.e., fail to teach a second predetermined recording period for

repeatedly recording one frame of compressed image data having a second information quantity per unit time as a still image which is shorter than a first predetermined recording period for repeatedly recording one frame of compressed image data having a first information quantity per unit time as a still image, where the second information quantity per unit time is larger than the first information quantity per unit time (e. g., a recording period for one frame of a still image in the SD mode which is shorter than the recording period for one frame of a still image in the SDL mode). Nothing has changed to alter this conclusion, with respect to the claims as then and subsequently presented on May 8, 2008, as well as with respect to the claims as now amended.

Moreover, as will be discussed further below, the cited Fisher, et al. patent, while it might describe the use of different time intervals for extracting still frames and recording the frames, there is no teaching or suggestion that these different time intervals be any way related to or be determined by recording the extracted frames in the SD and SDL modes. Instead, as stated by the Examiner, in commenting on this patent, as “shown in Figure 7 a second predetermined time interval for recording still frames wherein the still frames provide an overlapping region between each frame as the predetermined time period is shorter and thus provides overlapping of still frames as described in Column 7 Lines 12-67 through Column 8 Lines 47.” Thus, in the Fisher, et al patent, the time intervals for extracting and recording the still images are based on realizing overlapping of the still images and again, like the Imai, et al and Hori patents, there is simply no appreciation in this patent of repeatedly recording one frame to form a still image differently in the SD and SDL modes, let alone repeatedly recording the one frame in the SD mode for a shorter period than in the SDL mode.

Additionally, Imai, et al., and particularly the portion relied upon by the Examiner at column 10, lines 13-51 to reject Applicant's claims, merely discloses a process for the transmission of reproduced data to its recording apparatus 3 in which a reproduced still image is recorded. The Imai, et al. patent indeed mentions a case where the data "is transmitted repeatedly and continuously" in discussing the addition of DFFs to enable proper data recordation. Column 10, lines 38-50. Such reference to this particular scenario is believed to be the basis for the Examiner's assertion at page 3 of the Office Action that, "[f]urthermore, it is noted that still reproduction can be achieved . . . by having a frame repeated continuously for purposes of recording a still frame."

Nowhere, however, in the Imai, et al. patent is there any teaching or suggestion of Applicant's repeated recording of Applicant's moving image data as still image data, as is recited in Applicant's recording means for recording the moving image data output from said compressing means and repeatedly recording the image data of one frame output from said compression means as still image data on a recording medium. What the Imai, et al. patent discusses is opportunity for repeated transmission of data to its recording apparatus, and thereafter a singular recording by that apparatus of such data. The Examiner's observation acknowledges no more than this given the Examiner's reference, noted more fully above, of "a frame repeated continuously for . . . recording a still frame." Repeated transmission to a recording apparatus does not equate to, and thus is not a teaching or suggestion of, Applicant's presently recited feature of repeatedly recording the image data of one frame output from said compression means as still image data on a recording medium.

Continuing on page 4 of the Office Action, the Examiner turns to the Hori patent, and states that it “teaches a system [sic] for compressing and recording still images[.]” The Examiner, on page 5 of the Office Action, states the following:

It is taught by Hori to provide a control means for recording still image data based on a predetermined time to provide effective memory management between still and moving video in various modes as described in Column 6, lines 30-59. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention to use the recording mode system of still and moving images, as disclosed by Imai, and further teach the system to incorporate control of recording the still images based on a predetermined time, as taught by Hori, in order to allow for proper and efficient memory management of video images.

Hori, and particularly the sections pointed to by the Examiner of Figure 3, column 4, line 64 to column 5, line 65, and column 6, lines 30-59, addresses a still image recording mode in which image data is compressed at a compression ratio set by its control circuit 12. The compressed image data is thereafter recorded for a set, predetermined time period, see, for example, column 5, lines 4-6 and 18-23. No teaching or suggestion is provided with respect to any change in this predetermined time period. Thus, Hori fails to teach or suggest Applicant's changing between a first predetermined recording time period and second shorter predetermined recording time period, depending on the setting by Applicant's recording apparatus to either a first recording mode for repeatedly recording one frame of compressed image data having a first information quantity per unit time as a still image or a second recording mode for repeatedly recording one frame of compressed image data having a second information quantity per unit time as a still image, where the second information quantity per unit time is larger than the first information quantity per unit time.

At pages 5-6 of the Office Action, the Examiner references the abovementioned Fisher, et al. patent in asserting that such patent teaches and suggests Applicant's control means, and particularly the aspect thereof in which Applicant's predetermined recording period changes between first and second periods for recording a still image according to the recording mode set by Applicant's recording means. The Fisher, et al. patent, however, discloses merely the use of a scanning system to create composite still images. Abstract. Such images are compiled by extracting multiple still frames from video data at predetermined time intervals and then piecing these frames together. Abstract. The time intervals are determined by the scan speed of its scanning system 510 and the length of the still frames 614 themselves. Column 6, lines 64 to column 7, line 1. As the Examiner has referenced at page 6 of the Office Action, the Fisher, et al. patent, at column 8, lines 39-48, discloses selection of varied time intervals for generating its still frames 614.

However, as discussed previously, nowhere is there any teaching or suggestion in this patent of Applicant's claimed relationship between Applicant's first and second recording modes and Applicant's changing to a particular, predetermined recording period which is dependent upon which of the recording modes is set, as is expressed in Applicant's featured control means (which) changes the predetermined recording period for recording the still image data to a first predetermined period when the first recording mode is set by said recording mode setting means, and changes the predetermined recording period to a second predetermined period shorter than the first predetermined period when the second recording mode is set. More specifically, nowhere is it taught or suggested in the patent of a second predetermined recording period for repeatedly recording one frame of compressed image data having a second information quantity per unit time as a still image which is

shorter than a first predetermined recording period for repeatedly recording one frame of compressed image data having a first information quantity per unit time as a still image, where the second information quantity per unit time is larger than the first information quantity per unit time (e. g., a recording time for one frame of a still image in the SD mode which is shorter than the recording time for one frame of a still image in the SDL mode).

Therefore, Applicant's independent claim 1, and its respective dependent claims, in reciting a recording apparatus comprising imaging means for imaging an object and outputting moving image data, a memory for storing image data of one frame of the moving image data output from said imaging means, compressing means for compressing information quantity of the moving image data output from said imaging means and information quantity of the image data of one frame stored in the memory, recording means for recording the moving image data output from said compressing means and repeatedly recording the image data of one frame output from said compression means as still image data on a recording medium, recording mode setting means for setting a first recording mode for recording moving image data and still image data each having a first information quantity per unit time on a recording medium, and a second recording mode for recording moving image data and still image data each having a second information quantity larger than the first information quantity per unit time on the recording medium, instruction means for instructing recording of a still image, and control means for controlling said recording means to start recording on the recording medium still image data in response to a recording instruction of the still image by said instruction means and to stop recording the still image data a predetermined recording period after the recording was started, wherein said control means changes the predetermined recording period for recording the still image data to a

first predetermined period when the first recording mode is set by said recording mode setting means, and changes the predetermined recording period to a second predetermined period shorter than the first predetermined period when the second recording mode is set;
and Applicant's independent claim 9 in reciting a recording apparatus compressing information quantity of input moving image data and image data of one frame in the input moving image data, recording the compressed image data of one frame repeatedly as still image data and the compressed moving image data on a recording medium, and including a mode switch for setting a first recording mode for recording moving image data and still image data each having a first information quantity per unit time on the recording medium and a second recording mode for recording moving image data and still image data each having a second information quantity larger than the first information quantity per unit time on the recording medium, wherein said recording apparatus starts recording on the recording medium still image data with detection data for detecting the still image data recorded on the recording medium in response to a recording instruction of the still image data and to stop recording the still image data a predetermined recording period after the recording was started, said recording apparatus changing the predetermined period to a first predetermined period when the first recording mode is set by said mode switch, and changing the predetermined period to a second predetermined period shorter than the first predetermined period, when the second recording mode is set by said mode switch, thus patentably distinguish over the Imai, et al., Hori and Fisher, et al. patents, either when taken alone or in combination.

In view of the above, it is submitted that Applicant's claims, as amended, are in condition for allowance. Accordingly, reconsideration of the claims and passage of same to issue is respectfully requested.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Buck", with a stylized flourish at the end.

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